UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/013,541	01/26/1998	JOHAN P.M.G. LINNARTZ	PHN16210	3468

24737 7590 03/24/2004

PHILIPS INTELLECTUAL PROPERTY & STANDARDS
P.O. BOX 3001
BRIARCLIFF MANOR, NY 10510

EXAMINER	
MEISLAHN, DOUGLAS J	

ART UNIT	PAPER NUMBER
2137	38

DATE MAILED: 03/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/013,541	LINNARTZ, JOHAN P.M.G.	
	Examiner	Art Unit	
	Douglas J. Meislahn	2137	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 December 2003*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-42* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-34,36,37 and 39-42* is/are rejected.

7)☐ Claim(s) *35 and 38* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This action is in response to the amendment filed 30 December 2003 that added claims 22-42 and amended claims 1, 5, 9, 11-13, 15-19, and 21. The claim objections and 112 rejections have been overcome by the amendments.

Response to Arguments

2. Applicant's arguments filed 30 December 2003 have been fully considered but they are not persuasive.

3. Applicant's arguments with respect to 101 rejection levied against claim 9 and its dependents are unpersuasive because the claims do not recite functionally related material. While the two pieces of data are clearly related, their relationship does not make a change in one result in a change in the other. To be sure, the process by which the second piece of data is created from the first is a functional process. But once stored, changing one does not force a change in the other. Applicant says that non-statutory material includes data that is merely stored by a computer and follows by noting that claim 9 recites "multiple bit patterns *stored* on an information carrier, which multiple bitpatterns have a relationship that *can* be verified by a computer process" (emphasis added). The first part of the above quotation clearly shows that the subject material of the claim might fall within the scope of non-statutory subject material, while the latter half, by using "can" language, avoids forcing the implementation of a computer process, which would make the claim statutory. Furthermore, the claims are not

tangibly embodied. Add "computer-readable" before "information carrier" in the preambles.

4. In response to applicant's arguments against the references individually, specifically Moskowitz on page11, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

5. With respect to applicant's argument that Bahns et al. do not show first and second bitpatterns having a predefined relationship, the reference is relied upon to show a medium mark that contains contents, as is made clear in the previous office action. These contents, which are in a computer environment, have a bit pattern that reads on applicant's first bitpattern.

6. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the examiner clearly said, in the previous rejection, that the Moskowitz reference provided a motivation to combine – "nonrepudiation and validation"; also, Bahns et al. were cited as

teaching a watermark that "identifies as well as authenticates [a] disc", again providing a clear motivation for combining.

7. A person of ordinary skill in the art would recognize the references' cited sections as providing a reasonable chance of success because there are not elements that contradict each other.

8. Applicant's opinion that the rejection fails to show certain elements of the claims is perhaps born from a certain opacity of the outstanding rejection. While the examiner believes that the previous office action clearly laid out the grounds of rejection, a summary might enhance prosecution.

Oshima et al. teach a medium mark that is used to form a digital signature; the digital signature is applicant's second bitpattern. Bahns et al. provide motivation for enhancing Oshima et al.'s medium mark by adding content, which reads on applicant's first bitpattern. Since the second bitpattern is a digital signature based on the medium mark, which is specifically related to the first bitpattern, there is a predefined relationship between the first and second bitpatterns. Moskowitz specifically teaches using a signature, such as applicant's second bitpattern or Oshima et al.'s signature, as a watermark. As such, the outstanding rejection clearly meets the limitations of the claims.

The examiner thanks applicant for maintaining, and pointing out, the continuity between claims 1-13 and new claims 22-34.

Claim Rejections - 35 USC § 112

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claims 25-34, 36, 37, and 39-42 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

11. Claim 25 recites the limitation "the encoder means" in its first line. There is insufficient antecedent basis for this limitation in the claim.

12. Claim 26 recites the limitations "the contents of the medium mark" in the second line (delete the first "the") and "the watermarked information" in the second to last line. Delete "carrier" in the sixth line of the claim. There is insufficient antecedent basis for these limitations in the claim.

13. Claim 28 recites the limitation "the contents" across the last two lines. There is insufficient antecedent basis for this limitation in the claim. Delete "the". Claims 30 and 32 have the same deficiency, improper recitations of "the contents", in their third lines.

14. Claim 41 recites the limitations "the information carrier" and "the contents" in the second line. There is insufficient antecedent basis for these limitations in the claim. Change "information carrier" to "record carrier" and delete the "the" before "contents".

Claim Rejections - 35 USC § 101

15. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 9, 10, 16, 30, and 31 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. As was mentioned in the

previous office action, data on a disk is not statutory unless that data is a data structure. A data structure causes a processor to manipulate data in a specific way. This definition is based upon *In re Lowry*. Please see MPEP 2106 IV B. 1. (b).

Claim Rejections - 35 USC § 103

16. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

17. Claims 1-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oshima et al. (5761301) in view of Moskowitz et al. and Bahns et al.

In their abstract, Oshima et al. disclose a medium mark on an optical disk. See part 819b of figure 1 for reading a medium mark from the record carrier. The position information is sent to an encryptor that creates a digital signature of the position information, as described in the abstract. The digital signature reads on applicant's second bitpattern. Figure 18 shows the entire process of forming the digital signature and then verifying it.

Oshima et al. do not say that the digital signature is embedded as a watermark in user information or that applicant's first bitpattern is stored as contents of the medium mark. In lines 44-57 of column 6, Moskowitz presents embedding digital signatures into content as watermarks. Content is user information in that it is used by the user. This embedding provides nonrepudiation and validation. Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to

embed the signatures described in Oshima et al. as watermarks into the user information in order to assure nonrepudiation and validity.

In their abstract, Bahns et al. teaches watermarking an optical disc with a name, logo, design, picture, or other pattern which is applied within the structure of a disc. Figure 1 shows an example, with element 20 serving as a watermark for disc 10. This watermark, which is different than the digital watermarks disclosed by Moskowitz, identifies as well as authenticates the disc. Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use Bahns et al.'s watermark as the medium mark in Oshima et al. so that the medium mark not only authenticates but also identifies the medium.

Figure 18 of Oshima et al. anticipates the limitations specific to claims 2 and 3. Claim 4 is obvious because signing keys are (supposed to be) unique to devices and the software maker is disclosed as including both the embedding apparatus and the signature generator. Claim 5 contains limitations already discussed in claim 1. Element 819a of Oshima et al.'s first figure meets the first clause of claim 6. Data used to interpret the mark into the first bitpattern reads on applicant's seed and thus the second clause of claim 6 and claim 7.

Moskowitz and Oshima et al. have both taught the benefit of creating digital signatures as a way to secure information. Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use a cryptographic one-way function to created the first bitpattern, thereby meeting the limitations of claim 8.

The output disc of Oshima et al., when modified by the teachings of Moskowitz, contains the elements of claim 9. Claim 10 is obvious in view of Moskowitz's teaching of a digital signature being used to verify data. As such, it would be obvious to identify the content being watermarked. Claim 11 is covered by the above discussion of claim 1 and figure 18 in Oshima et al. Figure 18 also foresees claim 12. Claim 13 is covered by Moskowitz's discussion of secure hash functions. The limitations of claim 14 are rendered obvious by Moskowitz's discussion of digital signatures.

With respect to claim 15, the recorder has already been shown to possess means for reading the first bit pattern from the record carrier. The presence of this bitpattern in itself indicates a copy protection status, that being that the content is copy protected. The rest of the elements of claim 15 have been discussed above. The content of claims 16 and 17 has already been discussed. Claim 18 is rendered obvious by the abstract of Bahns et al., which teaches watermarking the optical disc at production. This feature also meets the limitations of claim 19. The "OK?" with two exiting paths in figure 18 of Oshima et al. anticipates a switch and thus claims 20 and 21. Claims 22-34 consist of limitations that have been treated by claims 1-13, respectively. Claim 36 is obvious for the same reasons as the last two clauses of claim 1. Art applied to the second clause of claim 1 shows the limitations of claim 39. Oshima et al. render obvious claim 40. The elements of claims 41 and 42 are obvious for the same reasons as those of claims 11 and 15.

Allowable Subject Matter

18. Claims 35 and 38 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Absent the 112 rejections, claim 37 would also contain allowable subject material.

19. The following is a statement of reasons for the indication of allowable subject matter: the wobble of a track in claim 35 is not shown by any of the reference, nor is its use to store medium mark rendered obvious. Using the first bitpattern as a key is neither shown nor rendered obvious.

Conclusion

20. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Douglas J. Meislahn whose telephone number is (703) 305-1338. The examiner can normally be reached on between 9 AM and 6 PM, Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory A. Morse can be reached on (703) 308-4789. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Douglas J. Meislahn
Examiner
Art Unit 2137

DJM